REMARKS

I. Introduction

Claims 1, 3 and 5 to 17 are pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Objection to the Specification

As suggested by the Office Action, "axial" has been replaced by "axle" on page 4, line 30. Therefore, withdrawal of the objection to the specification is respectfully requested.

III. Rejection of Claims 1 and 3 to 17 Under 35 U.S.C. § 103(a)

Claims 1 and 3 to 17 were rejected under 35 U.S.C. § 103(a) as obvious over the combination of U.S. Patent No. 5,709,394 ("Martin et al."), U.S. Patent No. 5,480,188 ("Heyring") and U.S. Patent No. 3,752,497 ("Enke et al."). Claim 4 has been canceled thus rendering the rejection of this claim moot. Applicant respectfully submits that claims 1, 3 and 5 to 17 are allowable for at least the following reasons.

Claim 1 relates to a hydropneumatic, level-regulated axle suspension for front and rear axles on vehicles. Claim 1 recites that the suspension includes two double-acting hydraulic suspension cylinders, whose cylinder spaces are each connected to a first pressure accumulator and whose annuli on a piston side are connected to a second pressure accumulator. Claim 1 further recites that the axle suspension for the front axle and the rear axle is designed as a reversible double-function axle suspension, so that each axle is switchable as an oscillating axle in a cylinder transverse combination or as a stabilizing axle in a cross combination. Claim 1 further recites that in the cylinder transverse combination the cylinder spaces on a given axle communicate and the annuli on the same axle communicate and in the cylinder cross combination the cylinder space of each cylinder on a given axle communicates with the annulus of the other cylinder on the same axle. Claim 1 has been amended to include the limitations of original claim 4. Specifically, claim 1 has been amended to recite that the rear axle of the vehicle is switched as the stabilizing axle and the front axle of the vehicle is switched as an

oscillating axle when there is a lower axle load on the front axle of the vehicle, and the rear axle is switched as an oscillating axle and the front axle of the vehicle is switched as the stabilizing axle when there is a lower axle load on the rear axle of the vehicle.

Martin et al. purportedly relate to a suspension means for a utility vehicle.

Martin et al. further state that the condition for static stability of the vehicle is that the vertical projection of G_i of its center of gravity G falls within a polygon of its rest points. See col. 5, lines 9 to 11. Martin et al. state that while the vehicle is traveling on level ground valves 38 and 39 fix the rear wheels 4 to the frame 2, while the front cylinders 17 and 18 are permitted to extend and retract in opposition to each other. See col. 6, lines 39 to 46. The vertical projection G_o of the center of gravity G of the vehicle is stated to lie well within the stability triangle ABC, such that small pits or bumps encountered by the rear wheels 4 may tilt the frame 2 sideways without harm to the overall stability of the vehicle. See col. 6, lines 47 to 51. When the vehicle is traveling along an uphill path the projection of gravity center G is stated to shift to a new location G_3, closer to the triangle base AB. See col. 6, lines 52 to 54. The stability margin is stated to have been improved such that the frame 2 may tilt sideways and the projection of G may shift to G_4 without immediate risk of the vehicle turning over. See col. 6, lines 54 to 59. When the vehicle is traveling down a steep hill with its rear end at a higher level than its front end, the vertical projection of G is stated to be shifted in a forward direction towards G_1 and the stability margin to the triangle sides BC and AC is stated to become critical. See col. 6, lines 60 to 64. Accordingly, when the vehicle changes from uphill to downhill the longitudinal inclination of the frame 2 is stated to change and the sensor 91 is state to close the electrical circuitry to the solenoid of the oscillation control valve 85 allowing the rear wheels to oscillate and fixing the front wheels. See col. 7, lines 4 to 9. Sensor 91 is stated to be capable of detecting conditions in which the vertical projection G_i of the center of gravity G shifts from the front wheels 3 to the rear wheels 4 and vice versa. See col. 6, lines 24 to 27. Sensor 91 is stated to sense the inclination of the frame 2 to the horizontal in the longitudinal direction of the vehicle. See col. 6, lines 27 to 29.

Nowhere do Martin et al. disclose that the rear axle of the vehicle is

switched as the stabilizing axle and the front axle of the vehicle is switched as an oscillating axle when there is a lower axle load on the front axle of the vehicle, and the rear axle is switched as an oscillating axle and the front axle of the vehicle is switched as the stabilizing axle when there is a lower axle load on the rear axle of the vehicle, as recited in amended claim 1. As indicated above, Martin et al. use a sensor 91 to detect shifts in the center of gravity by sensing the ***inclination of the frame 2 to the horizontal***. Martin et al. do not take into consideration the load on each axle in its determination as to which axle to stabilize. Consistently, in the vehicle disclosed by Martin et al. the front wheels are permitted to extend and retract and the rear wheels are fixed to the frame regardless of the difference in weight load on the front and rear axles. See col. 6, lines 39 to 46.

Nor do Heyring or Enke et al. cure the deficiencies of Martin et al. Heyring purportedly relates to a vehicle having a load support body, a pair of front ground engaging wheels and a pair of rear ground engaging wheels connected to the body to support the body. Abstract. A double acting fluid ram is stated to have a piston and to be interconnected between each wheel and the body. See Abstract and col. 4, lines 61 to 62. Each ram is stated to include a first and second fluid filled chamber on opposite sides of the ram piston, with the first and second chambers stated to vary in volume in response to vertical movement between the respective wheel and the body. See Abstract and col. 4, lines 65 to 67. First conduits are stated to provide fluid communication between the first chambers of the front and rear rams on the same side of the vehicle and second fluid conduits are stated to provide communication between the second chambers of the front and rear rams on the same side of the vehicle. See Abstract and col. 5, lines 7 to 11. A first further fluid communicating conduit is stated to interconnect the first fluid conduit on each side of the vehicle to the respective second fluid conduit on the opposite side of the vehicle, to thereby provide two fluid circuits, each including one of the first conduits, one of the second conduits, and one of the first further conduits interconnecting the first and second conduits. See Abstract and col. 5, lines 11 to 17. Each circuit is stated to be adapted to resiliently vary the fluid capacity of the circuit by an accumulator to accommodate fluid displaced from rams in that circuit with a resultant pressure rise in the circuit. See Abstract and col. 4, lines 32 to 39. Nowhere, however, does Heyring disclose, or even suggest, that the rear axle of the vehicle is

switched as the stabilizing axle and the front axle of the vehicle is switched as an oscillating axle when there is a lower axle load on the front axle of the vehicle, and the rear axle is switched as an oscillating axle and the front axle of the vehicle is switched as the stabilizing axle when there is a lower axle load on the rear axle of the vehicle, as recited in amended claim 1.

Enke et al. purportedly relate to a installation for stabilizing a vehicle body against curve-tilting. Pressure medium is stated to be fed in dependence on the curve drive directly to the pistons of cylinder-pistons aggregates interconnected between the wheels and the vehicle body, in such a manner that the cylinder-piston aggregate is coordinated to the wheel on the inside of the curve is reduced in the sense of lowering the vehicle body and the cylinder-piston aggregate coordinated to the wheel on the outside of the curve is elongated in the sense of lifting the vehicle body. See col. 1, lines 25 to 36. Enke et al. do not disclose, or even suggest, that the rear axle of the vehicle is switched as the stabilizing axle and the front axle of the vehicle is switched as an oscillating axle when there is a lower axle load on the front axle of the vehicle, and the rear axle is switched as an oscillating axle and the front axle of the vehicle is switched as the stabilizing axle when there is a lower axle load on the rear axle of the vehicle, as recited in amended claim 1. As indicated above, Enke et al. do not disclose any difference in the treatment of the front and rear axles. Rather, the focus is on the difference in treatment of cylinder-pistons ***on the same axle*** and on the inside and outside of a given turning curve.

In regard to original claim 4, which has been incorporated into amended claim 1, the Office Action alleges that Martin et al. discloses the axles being switched to oscillating axles, when a load is reduced on that axle, and to a stabilizing axle, when a load is increased on that axle, because when the vehicle encounters uneven terrain the load is increased on one of the axles, that axle becoming the stabilizing axle while the other axle becomes the oscillating axle. See Office Action at p. 4. Martin et al. do not disclose, nor does the Office Action even allege, that Martin et al. discloses a check to determine whether there is a ***lower*** axle load on the rear axle of the vehicle, as recited in amended claim 1. Respectfully, just because one axle is encountering uneven terrain does not necessarily mean that this axle has a higher load given that loading on the vehicle or the weight distribution of the vehicle itself may result in a higher load being on the

other axle.

In this regard the Specification states as follows:

> If the front axle is loaded with a very high weight in front load work, it would be desirable for the front axle to be stabilized. In driving on the road, it is more advantageous for the front and rear axles to be able to act as stabilizing axles at the same time in some load cases for the purpose of reinforcing the rolling stability. There is an unlimited parallel suspension on both axles, however, with a somewhat less favorable load distribution than in the case of a pure three-point support. In the other embodiment of the present invention, there is a three-point support in the case of great load differences between the axles by switching one axle as an oscillating axle and the other as a stabilizing axle. In the preferred case, the axle having the low load is switched to the oscillating function and the axle having the high load has the stabilizing function.

To the extent that the Examiner is relying on the doctrine of inherency, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics <u>necessarily</u> flows from the teachings of the applied art." *See* M.P.E.P. § 2112; emphasis in original; and *see, Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Nowhere does the Examiner rely on technical reasoning to support its <u>conclusion</u> that encountering uneven terrain necessarily results in a higher load on the front axle.

In regard to claim 13, the combination of Martin et al., Heyring and Enke et al. do not disclose that switching from oscillating axle suspension to stabilizing axle

suspension is done as a function of the pressure in the cylinder spaces (4, 5). As indicated above, Martin et al. rely on readings from sensor 91 for the inclination of the vehicle to determine when to stabilize the front wheels not on pressure readings in the cylinder spaces. The Office Action alleges that pressure is determined and controlled by the hydraulic control means 26, the pressure relief valve 45, the electrical command means 49 and the sensor 91. Respectfully, these elements may be used to control the oil flow and pressure in the cylinder spaces, however, Martin

et al. do not disclose the switching from oscillating axle suspension to stabilizing axle suspension being done as a function of the pressure in the cylinder spaces. Consistently, nowhere do Martin et al. disclose measuring or monitoring the pressure in the cylinder spaces.

In regard to claim 16, the combination of Martin et al., Heyring and Enke et al. do not disclose that the axle (39, 40) may be at least one of secured and pressed against stops for the purpose of blocking the suspension. The Office Action discloses that axles 55 and 56 may be pressed against stops A, B, D and E for the purpose of blocking the suspension and securing the suspension. Points A, B, D and E represent undersides of the wheels, i.e., the point where they contact the ground. See col. 5, lines 11 to 24. Respectfully, the vehicle wheels do not qualify as suspension stops, as recited in claim 16.

Therefore, for the foregoing reasons, the combination of Martin et al., Heyring and Enke et al. do not disclose all of the limitations of claims 1, 13 and 16.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As indicated above, nowhere does the combination of Martin et al., Heyring and Enke et al. disclose, or even suggest, all of the limitations of claims 1, 13 and 16. Therefore, the combination of Martin et al., Heyring and Enke et al. does not render claims 1, 13 and 16 obvious.

Since the combination of Martin et al., Heyring and Enke et al. does not disclose, or even suggest, all of the limitations of claim 1 as more fully set forth above, it is respectfully submitted that the combination of Martin et al., Heyring and

Enke et al. does not render obvious claims 3, 5 to 12, 15 and 17, which ultimately depend from claim 1 and therefore include all of the limitations of claim 1. It is respectfully submitted that these claims are allowable for at least the same reasons that claim 1 is allowable. In re Fine, supra (any dependent claim that depends from a non-obvious independent claim is non-obvious).

Therefore, for all the foregoing reasons, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 1, 3 and 5 to 17 are respectfully requested.

IV. Conclusion

Applicant respectfully submits that all of the pending claims of the present application are now in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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